

ABSTRACT OF THE DISCLOSURE

An integrated circuit metallization structure using a titanium/aluminum alloy, and a method to generate such a structure, provide reduced leakage current by
5 allowing mobile impurities such as water, oxygen, and hydrogen to passivate structural defects in the silicon layer of the IC. The titanium layer of the structure is at least partially alloyed with the aluminum layer, thereby restricting the ability of the titanium to getter the mobile impurities within the various layers of the IC. Despite
10 the alloying of the titanium and aluminum, the metallization structure exhibits the superior contact resistance and electromigration properties associated with titanium.